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Butternut

(Juglans cinerea)

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Butternut is a small to medium-sized tree which grows scattered sparsely throughout the northeastern part of the United States. It is frequently found in rather open situations where it has a short trunk and widely spreading branches. Forest-grown butternut trees, in their effort to reach the sunlight above the surrounding growth, generally produce comparatively long trunks. Butternut is a close relative of the well-known black walnut, but occurs in much smaller quantities. The wood resembles that of black walnut in texture, but is lighter in color and in weight and not so strong or hard. The small amount of lumber produced is used almost entirely for furniture.

Nomenclature.—Butternut is frequently called white walnut. Other names occasionally used are American white walnut and oilnut.

Distribution and growth.—Butternut grows naturally in the United States from New England westward through New York and the southern part of the Lake States into South Dakota. Southward its range extends into northern Arkansas, Mississippi, Alabama, Georgia, and South Carolina (fig. 1). The range of butternut also extends northward from New England and New York into Canada, where it occurs in western New Brunswick and in southern Quebec and Ontario.

The tree requires an abundance of sunlight for satisfactory growth. It is found both in the open and scattered through forests of mixed hardwoods, never in pure stands. When grown in the open, butternut has a short trunk dividing into large spreading branches at about one-half its height or less above the ground. Mature open-grown trees are generally 40 to 60 feet high and 1 to 2 feet in diameter. Forest trees are comparatively tall, and under favorable conditions exceptional specimens may approach 100 feet in height and 3 feet in diameter and may not divide into limbs for 40 feet or more. Butternut prefers a rich, deep soil with plenty of moisture, but will grow under a wide range of soil and climatic conditions, provided the crown can reach sunlight. Early growth is fairly rapid. The limbs are frequently broken by storms and the injured portions of the trunk attacked by insects and fungi. The life of butternut trees is generally less than 100 years. Many die of disease before they have reached maturity.

The tree produces oblong nuts about 1 inch in diameter and 1½ inches long, tapered at both ends. The sweet, oily kernel is the basis for the name butternut. The nuts are a favorite food for rodents,

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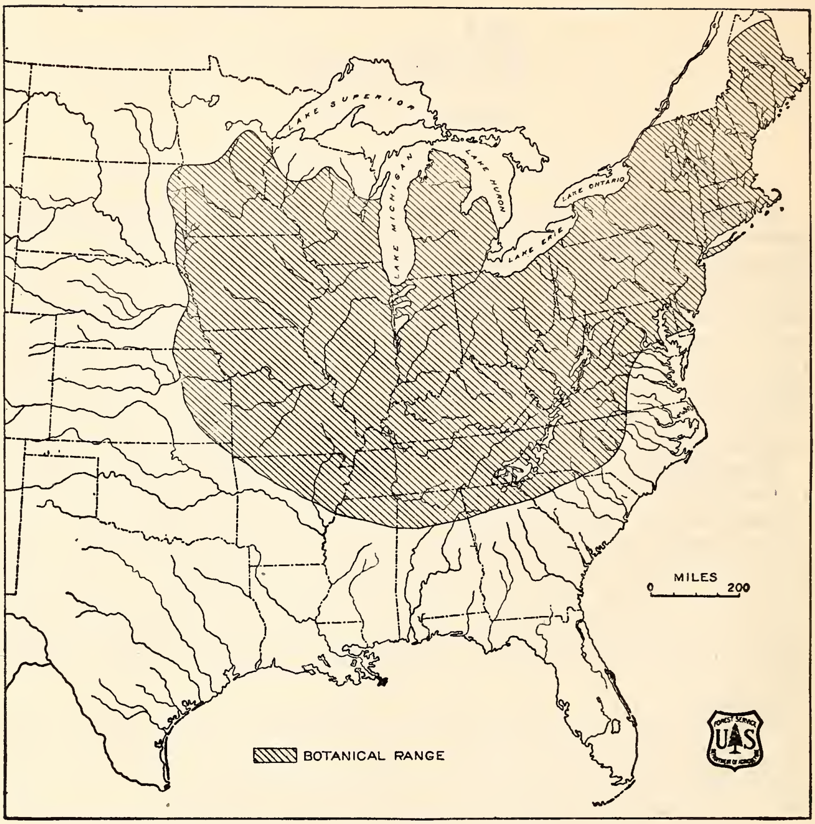

FIGURE 1.—Range of butternut (*Juglans cinerea*).

especially squirrels, which often bury them for future use. Many of the buried nuts are overlooked and some sprout and grow.

Production.—The reported production of butternut lumber in 1909 [1] was 1,209,000 board feet. In 1913 it reached its maximum cut of 1,964,000 board feet (fig. 2). Since then production has dropped considerably, falling to 70,000 board feet in 1933—a year of depression in business. In 1941 a cut of 922,000 board feet of lumber was reported. The average annual cut of butternut lumber for the 5-year period 1937–1941 was 434,000 board feet. The total annual cut of butternut for all purposes, including comparatively small amounts used for fuel wood and local construction, is estimated roughly at the equivalent of 500,000 board feet. West Virginia ranked first as a producer of butternut lumber in 8 of the 14 years during the period 1916–29.[2] Other States ranking first in 1, 2, or 3 of the years in this period were Wisconsin, Indiana, and Tennessee. The number of

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[1] The earliest year for which production statistics on butternut are available.

[2] No information is available on the production of butternut lumber by States later than 1929.

States contributing to the cut of butternut lumber varied from 18 in 1913 to 1 (West Virginia) in 1926 and 1927.

Supply.—No data are available on which to base a reliable estimate of the stand of butternut of saw-timber size. It is probable, however, that this stand amounts to at least 25,000,000 board feet.

Properties.—The heartwood of butternut is a light chestnut brown, occasionally with a reddish tinge, becoming darker with exposure. The narrow sapwood (rarely over 1 inch in width) is white to light brown. The annual rings are distinctly indicated by the marked difference in the size of the pores in the summerwood and the adjoining springwood of the following year. Butternut wood is moderately light in weight, moderately weak in bending and in endwise compression, lacking in stiffness, moderately soft, and moderately high in shock resistance. It is easy to work with tools, generally straight-grained, and is without characteristic odor or taste. The wood resembles black walnut in texture, but is lighter in color and considerably lighter in weight; like black walnut, it is capable of taking a rich, lustrous finish. Butternut has a moderately small shrinkage. Definite information on its seasoning characteristics is not available, but it is said to stay in place well when once properly dried. In durability when placed under conditions favorable to decay, butternut is classed with birch, beech, and maple.[3] Its lasting qualities under such conditions rate below those of black walnut.

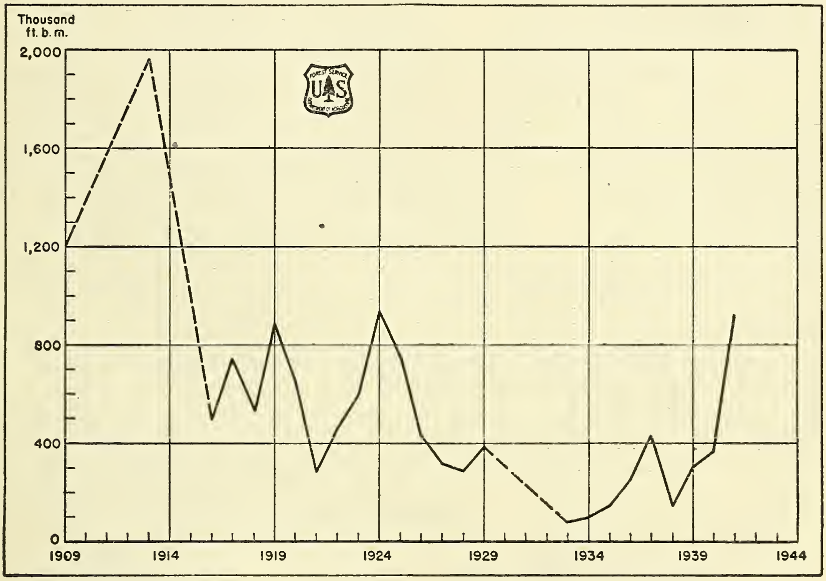

FIGURE 2.—Lumber production of butternut, 1909–41.

Principal uses.—Butternut is used principally for furniture and to a much smaller extent for boxes and crating, general millwork, and patterns and flasks. In recent years nearly 90 percent of the butternut used in the manufacture of wooden products has gone into furniture. This is due in part to the present vogue for light-colored furniture woods and also to the ability of butternut to take a handsome finish.

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[3] Refers to heartwood. The sapwood of all species lacks durability. Definite records on the durability of butternut are not available.

Butternuts are gathered in considerable quantities, largely for home consumption. Some are sold to candy makers. On account of their rich, distinctive flavor, butternuts are preferred by many to black walnuts but are of much less importance commercially.

Before aniline dyes were available in this country, a decoction made from butternut bark was used to dye cloth a brown color.

Table 1 shows the amounts of butternut used in the manufacture of wooden products in 1912, 1928, 1933, and 1940. The figures include butternut largely in the form of lumber, with a very small proportion of logs and bolts.

Table 1.—*Butternut used in the manufacture of wooden products*

[Thousands of board feet]

Classes of products	1912	1928	1933	1940
Agricultural implements	10			
Boxes, baskets, and crating	578	35	37	35
Car construction and repair	1			
Caskets and burial boxes	16	64		
Dairy, poultry and apiary supplies				12
Fixtures	394	60	3	8
Furniture	614	110	174	609
Handles	2			
Instruments, musical	98	16		
Instruments, professional and scientific	30			
Machinery	15			
Patterns and flasks	43	7		10
Rollers, shade and map	5			
Sash, doors, general millwork	232	19	33	25
Ship and boat building	78	49	2	
Toys	10			
Vehicles	11			
Woodenware and novelties	174	12	11	
Total	2,311	372	260	699

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